



SPENT FLUORESCENT LAMPS CONTAINING MERCURY

Technical Guidance Document HW 95-01

The following guidance is provided for the management of spent lamps that contain mercury including fluorescent, high intensity discharge (HID), neon, mercury vapor, high-pressure sodium, and metal halide lamps. These lamps contain elemental mercury in a powder phosphor, usually coating the lamp interior. When mismanaged, this mercury presents a danger to public health and the environment. If a lamp is broken in an unconfined area or incinerated, mercury can become airborne as a vapor; if broken within the confinement of a landfill, mercury can enter the landfill leachate.

This policy attempts to strike a balance between supporting and encouraging activities that would minimize the release of mercury to the environment, and imposing a strict regulatory approach that may act as a barrier to the implementation of retrofit initiatives such as the EPA "Green Lights" program.

Requirements for Non-Generators of Hazardous Waste and Small Quantity Generators

In instances where less than 100 four-foot fluorescent lamps (or the equivalent in other lamp types) are generated or accumulated in a calendar month, these lamps may be managed as other routine solid wastes. Whenever possible, waste lamps should be placed in the original box or shipping container in order to minimize breakage. It should be noted that 100 four-foot fluorescent lamps approximates 55 pounds.

For quantities of lamps exceeding 55 pounds (i.e., more than 100 four-foot fluorescent lamps), the following guidance should be followed. Many lamps exhibit the toxicity characteristic for mercury and, consequently, are classified as RCRA hazardous waste. Both EPA and KDHE have chosen to regulate such lamps as universal waste. The universal waste rule provides a streamlined management

system for hazardous waste batteries, certain hazardous waste pesticides, and mercury-containing thermostats. The universal waste rule allows handlers (i.e., generators) and transporters of universal wastes to comply with less stringent standards.

Requirements for Kansas Generators and EPA Generators

As in the case of all wastes having the potential to be hazardous, it is the responsibility of the generator to determine if his or her waste is a RCRA hazardous waste. This determination must be based upon a TCLP analysis for mercury. Alternatively, the generator may apply knowledge about the lamps such as information provided by the manufacturer of the specific product (some lamps are manufactured using reduced quantities of mercury and when disposed, such lamps are not hazardous waste). Low mercury lamps may be disposed of as solid waste. If representative samples collected from a sample batch of lamps fail the TCLP standard, then the entire batch must be managed as hazardous waste. If the TCLP test demonstrates that the waste is not hazardous waste, the lamps may be managed as other routine solid wastes.

Universal Waste Management

The requirements for persons desiring to manage waste lamps as universal wastes fall into two categories based upon whether the person is a small quantity or large quantity handler of universal wastes. A universal waste handler who accumulates less than or equal to 5,000 kg (11,023 lbs) total universal waste at any time is a small quantity handler of universal waste (SQHUW). Universal waste handlers accumulating more than 5,000 kg (11,023 lbs) total universal waste at any time are classified as large quantity handlers of universal wastes (LQHUW). Universal waste handlers do not need to count their lamps toward their hazardous waste generation rate.

Requirements applicable to both SQHUWs and LQHUWs:

1. Package lamps in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. These containers and packages must remain closed. Any broken or leaking container must be immediately cleaned up and placed in a new container;
2. Label each universal waste lamp or container holding lamps with the words "Universal Waste – Lamp(s)," "Waste Lamp(s)," or "Used Lamp(s)." Place the date the container was filled on the outside of each container;
3. Respond to releases of universal wastes;
4. Comply with employee training requirements;

5. Handlers are prohibited from sending universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination. Prior to sending a shipment to another universal waste handler, the originating handler must ensure that the receiving handler agrees to the shipment. Handlers must also comply with requirements for rejected shipments of universal waste; and
6. Handlers may accumulate universal waste lamps for one year. If lamps are stored longer than one year, the handler must be able to demonstrate that such accumulation is necessary to facilitate proper recovery, treatment, or disposal.

In addition to the above six requirements two additional requirements are applicable to all LQHUWs:

1. Notify KDHE of universal waste management activities *before* meeting or exceeding the 5,000 kg (11,023 lbs) storage limit, and obtain an EPA identification number; and
2. Track waste lamp shipments by maintaining records documenting shipments received by, and sent from, the facility.

The Universal Waste Regulations may be found in 40 CFR Part 273.



For additional information regarding proper management of hazardous, solid, or universal waste, you may contact the Bureau of Waste Management at (785)296-1600 or the address at the top of this document.